

# **The Role of Education and Public Outreach (E/PO) in the Next Generation Space Telescope (NGST)**

**INCLUDING REVISED E/PO REQUIREMENTS  
TO BE ISSUED IN AN AO AMENDMENT**

**Presented at the NGST Pre-Proposal Conference  
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# OSS Education and Outreach

## What Are We Trying To Do?

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- Share the excitement of space science discoveries with the public
- Enhance the quality of science, mathematics and technology education, particularly at the pre-college level
- Help create our 21st century scientific and technical workforce

# **OSS Education and Public Outreach**

## **Where Are We Now?**

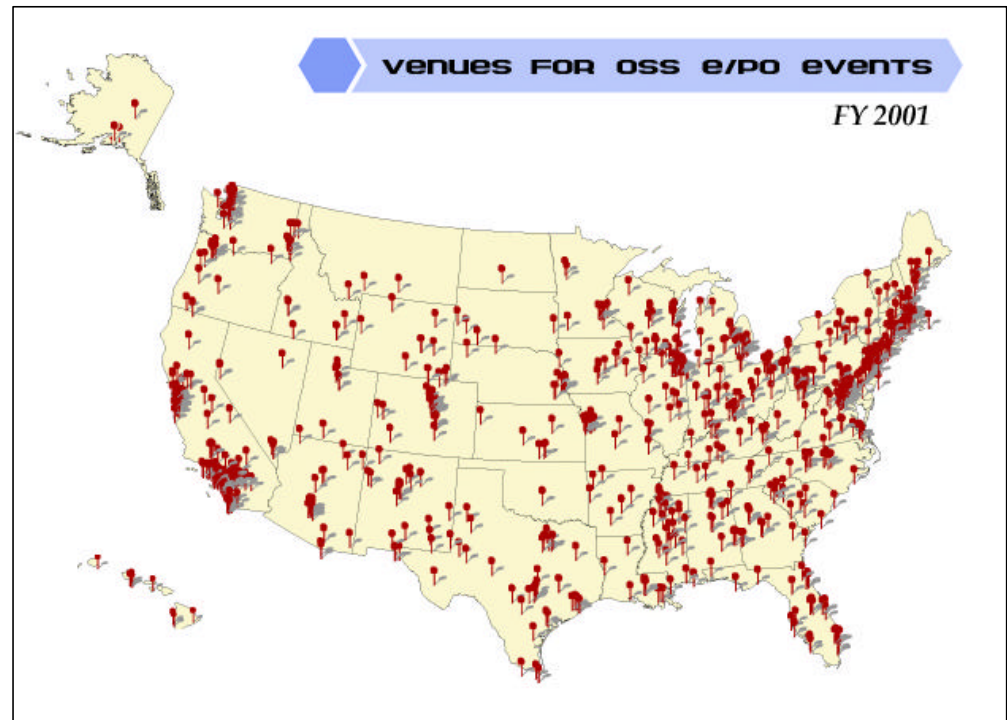
- OSS is firmly committed to making a substantive contribution to pre-college education and the broad public understanding of science, mathematics, and technology
- E/PO is an integral part of every mission and research program.
- A major national program of space science education is now underway. For further information see:
  - The OSS FY 2000 E/PO Annual Report (January 2001)
  - The OSS E/PO Newsletters
  - The OSS E/PO Homepage <http://space.science.nasa.gov/education>
  - The OSS FY 2001 Annual Report (in preparation)

# Extent of FY 2001 OSS E/PO Program

Quick-Look Data as of 9-Nov-01

84 OSS Missions and Programs Reporting

- ~100 new E/PO products.
  - ~400 E/PO activities.
  - ~3000 discrete E/PO events.
  - Presence in all 50 states, DC, PR, and VI.
  - Presence at ~20 national and ~40 regional E/PO conferences.
- ~100 awards and other forms of public recognition received.
  - ~900 OSS-affiliated scientists participated.



# **OSS Education and Public Outreach**

## **What Are We Looking For In The NIRCam Proposals?**

- A full E/PO proposal giving a credible story containing specifics and commitments/reality (not rhetoric).
  - See the coming Amendment (and next chart) for specific proposal guidelines.
  - Expanded to 4 pages . A good case can be laid out in just 4 pages.
  - Letters of support/commitment from E/PO partners are important.
- A program that is aligned to the OSS E/PO Strategy and E/PO Implementation Plan
  - The content of both these documents is directly reflected in the Evaluation Criteria which spell out in detail what is meant by the “quality of the proposed E/PO program”
- A commitment to adequately fund the proposed E/PO program
  - OSS Guideline: 1-2% of the total mission cost through all phases excluding launch vehicles

**E/PO will play a role in the selection process**

# **OSS Education and Public Outreach**

## **What Should The NIRCam Proposals Discuss?**

- E/PO Objectives, planned activities, implementation plans, evaluation plans, PI and science team members involvement, educational personnel involvement, partnerships and collaborations with education and outreach organizations.
- Organization, management, and budget.
- Plans for developing and disseminating education/outreach products and materials, for contributing to the training of underserved and/or underutilized groups in science and technology, and for coordination of the planned E/PO program with the umbrella NGST E/PO program.
- Letters of support/commitment from partners and resumes of key E/PO personnel should be included in the appendices to the proposal.

# **How Will We Judge Quality?**

## **General Evaluation Criteria**

The general criteria to be applied to the evaluation of the E/PO component of all NIRCам proposals are:

- the quality, scope, realism, and appropriateness of the proposed E/PO program, including the general intellectual linkage to the science objectives of the parent research proposal or mission;
- the adequacy, appropriateness, and realism of the proposed budget, including demonstration of effective use of funds;
- the capabilities and commitment of the proposer and the proposer's team to carry out the proposed E/PO program, including the direct involvement of one or more science team members in overseeing and carrying out the proposed E/PO program, as well as the establishment or continuation of effective partnerships with institutions and/or personnel in the fields of education and/or public outreach as the basis for and as an integral element of the proposed E/PO program; and
- the appropriateness of plans for evaluating the effectiveness and impact of the proposed education/outreach activity.

# **How Will We Judge Quality?**

## **Specific Evaluation Criteria**

To ensure that the goals and objectives of the OSS E/PO strategy are realized in practice, proposals will also be evaluated using one or more of the following specific criteria as appropriate. The specific E/PO criteria are:

- when dealing directly or strongly affecting the formal education system (e.g. teacher workshops or student programs carried out at public institutions, such as science museums and planetariums), the degree to which the proposed E/PO effort is aligned with and linked to nationally recognized and endorsed education reform efforts and/or efforts at the state or local levels;
- the degree to which the proposed E/PO effort contributes to the training, involvement, and broad understanding of science and technology by underserved and/or underutilized groups; and
- the potential for the proposed E/PO activity to expand its scope by having an impact beyond the direct beneficiaries (e.g., reaching relatively large audiences, being suitable for replication or broad dissemination, and/or drawing on resources beyond those directly requested in the proposal).



## **How Will We Judge Quality?**

### **Mission Criterion**

The mission criterion to be explicitly considered as part of the evaluation is:

- **The relationship of the planned E/PO program to unique scientific or technical aspects of the NGST mission.**

Plans for coordination of the proposed activities with the umbrella NGST E/PO program will also be explicitly considered in the evaluation process.

# **OSS Education and Public Outreach**

## **How Are We Going To Do The Evaluation?**

The process will be part of and exactly parallel the TMCO process

- Will involve an evaluation by a panel of experts, the formulation of questions where clarifications are needed, participation in site visits, and the preparation of summary findings for consideration by the Selecting Official as part of the overall evaluation and selection process

## **What Are We Looking For In The Telescope Scientist, Facility Scientist, MIR Science Lead and Team Members, and (U.S.) Interdisciplinary Scientist Proposals?**

- Commitment by investigator and team members to:
  - participate in the NGST Outreach program, led by the Office of Public Outreach (OPO) at STScI.
  - devote approximately 5% of NGST time to E/PO.
  - Examples: developing ideas; preparing written background information; preparing data for use in E/PO materials.
- Proposals must include:
  - a single page outline of proposed E/PO activities.
  - an explicit statement that proposers are willing to participate in E/PO on this basis.
  - budget for both time and funds for such E/PO work.

## **How Will We Coordinate NGST Investigator E/PO Activities?**

- Investigator teams will be expected to become actively involved in an NGST E/PO program to be carried out by the STScI OPO.
- After selection, steps (such as planning workshops) will be taken to coordinate and integrate unique instrument investigator E/PO programs into the overall program.
- **Long-range goal is to establish a network of NGST scientists across the country who are both carrying out their own E/PO programs and acting as local agents for the NGST Program's national efforts.**

# **OSS Education and Public Outreach Sources of Information**

- A Short Reading List:
  - OSS Education and Public Outreach Strategy
  - OSS Education and Public Outreach Implementation Plan
  - OSS Explanatory Guide for the Education/Public Outreach Evaluation Criteria
  - OSS FY 2000 Education and Public Outreach Annual Report
- The OSS “Explanatory Guide”
  - Contains answers to “Frequently Asked Questions”
  - Describes in more detail what most of the Evaluation Criteria mean (two new criteria have been added)
  - Was developed to ensure that E/PO efforts are prepared and evaluated on a consistent basis

# **OSS Education and Public Outreach**

## **Sources of Assistance**

- Call your local Broker/Facilitator or the appropriate OSS Education Forum
  - The Support Network is there to help, but is not responsible for preparing the E/PO portion of your Concept Study Report
- In accord with the operating principles developed by the Support Network, discussions with individual Teams developing proposals will be treated as proprietary
- Contact information is available through the OSS E/PO Homepage
- Questions about the NGST E/PO Program may be directed to the STScI Office of Public Outreach.

# **OSS Education and Public Outreach**

## **Some Summary Observations**

- OSS is serious about education and public outreach
  - A major national program is now underway
- E/PO will be an integral element of the NIRCам evaluation and selection process
  - E/PO has made a difference in some selections
- OSS has seen a significant evolution in the level of maturity, ambition and sophistication in mission E/PO programs over the past several years
  - We have high expectations for NGST E/PO.
- Resources are available to help the PI's in developing their proposals
  - Contact the Forums and Broker/Facilitators for help
  - Read the “Explanatory Guide” and other available documentation
- Treat E/PO with the same rigor and professionalism that you treat the science and engineering aspects of your proposal.